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AGENDA REPORT

TO: DEANNA J. SANTANA
CITY ADMINISTRATOR

FROM: HOWARD A. JORDAN
CHIEF OF POLICE

SUBJECT: Latent Print Unit Status Report

DATE: May 31, 2012

City Administrator

Approval

Date

6/12/12

COUNCIL DISTRICT: City-Wide

RECOMMENDATION

Staff recommends the Public Safety Committee approve and accept this informational report from the Chief of Police on the status of the Latent Print Unit's services, workload, staffing, and case prioritization processes.

EXECUTIVE SUMMARY

The Latent Print Unit of the Criminalistics Laboratory is responsible for maintaining custody of latent print evidence and conducting forensic analysis of latent print evidence. Due to high rates of crime and an insufficient number of analysts, demand for service chronically exceeds capacity. Unit staffing has declined by 33% since 2006. Latent Print casework is detailed and time consuming. Investigators communicate whether their request is a priority request at the time of submission. Prioritization of requests for service in homicides and occasionally in other offenses is determined primarily by the lieutenant in charge of the Major Crimes Unit Section 1 based on many rational factors. The Laboratory's own policy prioritizes crimes against persons over those against property and crimes with court dates over those without, among other factors. The District Attorney's Office staff advises the Laboratory of cases with court deadlines, and work is scheduled to meet those time constraints. An alternative policy or administrative instruction regarding the prioritization of work to meet court deadlines or other investigative requirements is not needed. Priority is constantly adjusted based on the occurrence of new, serious crimes, impending court dates, the complexity of the casework itself, the demand for service and other factors. Additional laboratory staff is needed to meet the caseload demands and provide more predictable turnaround times. Information on the number of additional staff and associated costs is provided.

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OUTCOME

The report outlines the services provided by the Latent Print Unit, throughputs and backlogs, staffing, case complexity, factors used to assess case priority, and resources needed to improve service delivery.

BACKGROUND/LEGISLATIVE HISTORY

The Latent Print Unit is one of the technical units within the Criminalistics Laboratory. The Unit has both evidence custodial responsibilities and casework responsibilities. The Unit provides services to the Oakland Police Department and the Alameda County District Attorney's Office in cases arising in the Oakland jurisdiction.

Services Provided

The Unit serves as the department custodian of all latent print lifts collected from crime scenes throughout the city. Considerable work is involved in logging evidence, tracking it, and maintaining it.

The Unit is also responsible for conducting latent print examinations. There are five main types of examinations.

Latent Print Quality Assessment: involves an evaluation of all latent print submissions collected from crime scenes throughout the city to determine whether the submission contains any computer searchable print associated with the submission. Results are communicated each business day to investigators by means of a Latent Print Quality Log Report.

Latent Print Processing: involves applying various chemical, physical, and visual techniques to develop and recover latent prints from evidence items that are not amenable to processing in the field by traditional dusting techniques.

Latent Print Comparisons: involves establishing whether a latent print is of value for comparison purposes and, if it is, conducting a comparison of the latent print(s) against the fingerprint/palm print records of specific individuals. The names of the individual(s) of interest are provided by investigators or may be produced as a consequence of an automated search of the latent print in a computerized fingerprint database known as APIS (Automated Fingerprint Identification System).

Computerized Search of Latent Prints (APIS Searches): applicable to prints of sufficient quality, involves the searching of the print in local, state and, in some cases national AFIS systems. The APIS search almost always returns a candidate list which must then be evaluated to determine if any of the candidates could actually be the source of the print. If such a candidate is included in the list, a latent print comparison examination is performed, as described above.

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Crime Scene Processing: Unit staff process crime scenes in certain serious incidents when latent print development techniques are required that are not available to the Police Evidence Technicians who handle the vast majority of scenes.

Caseload

1. Latent Print Quality Assessment

Based on the three year period ending May 23, 2012, staff received, on average, 870 submissions of latent prints annually. Submissions are composed of latent print lift cards (at least one, but usually multiple cards) bearing latent prints collected from crime scenes by police evidence technicians or generated in the course of latent print processing casework in the laboratory. Approximately 26% arise from crimes against persons (e.g. homicides and sexual assaults); 74% arise from property crimes.

The latent print submissions are logged and then evaluated to determine if they contain at least one computer searchable (AFIS) quality print. This work is performed and reported each business day by means of the Latent Print Quality Log Report which is sent to investigative units. The Report is the mechanism by which investigators are informed whether there are prints associated with an incident and whether they are of computer searchable quality. The lifts are then filed and maintained by the Unit, pending requests for analysis.

2. Latent Print Casework Requests

Investigators submit requests for laboratory service to the Unit. The caseload for the three year period ending May 23, 2012 is provided below.

Table 1: Workload

Crime Type	Requests (cases) Received	Requests (cases) Completed	Requests (cases) Cancelled	Backlog* Requests (cases)
All	923 (867)	301 (270)	107 (104)	515 (493)
	Requests	Requests	Requests	Backlog*
Homicide cases	155	111	11	33
Other person crimes cases	258	92	33	133
Property crimes Cases	467	82	11	374
Other	43	16	52	-25*

*The backlog presented assumes that the requests completed and canceled during the three year period defined are all drawn from the population of requests received during the three year time period defined. It is highly probable that at least some of the work was conducted on requests received prior to the beginning of the three year time frame. That fact explains the apparent negative backlog in the "Other" category.

Data have not been provided beyond this three year period due to the likelihood that such statistics would include many cases that are either adjudicated or beyond the statute of limitations. Including them would have the potential effect of overstating the backlog.

Table 2 shows the breakdown of requests by the type of analytical service requested:

Table 2: Workload by Request Type

Requests	(#)	Processing	AFIS Search	Comparison
Received	(923)	206	523	194
Completed	(301)	48	120	133
Cancelled	(107)	76	14	17
Backlog	(515)	82	389	44

As the data in the tables show, demand clearly exceeds capacity to do the work. However, without consideration of case complexity, the number of requests alone does not adequately represent the workload associated with each request.

Casework Complexity

There is no "standard" latent print request. There is also no reliable method to predict the outcome of an examination or whether it will generate additional work. As a consequence it is very difficult to predict how long it will take to complete work on a case—a question we are frequently asked.

Processing requests can involve a single item or a large number of individual evidence items. Each item is subjected to multiple analytical processes, exponentially increasing the work involved. With each application, the surfaces must be examined to see if prints of value have been developed. If so, they are lifted or photographed before applying the next procedure. If usable prints are developed, requests are then launched for latent print comparison and/or for AFIS searches. A single processing request averages over eleven items of evidence for examination.

A comparison request may involve one latent print or several dozens for comparison against one or numerous individuals of interest. Each print and each individual to whom it is compared represent multiple examinations of multiple finger and palm print images against the unidentified latent. It is not uncommon for the orientation of the latent print to be ambiguous. In such cases

the print must be evaluated in multiple different orientations, thus lengthening the time the examination takes. Unidentified AFIS quality latent prints are candidates for further work.

AFIS searches are launched on AFIS quality prints that are not identified. Candidate lists are produced which must be evaluated to determine whether the actual source of the print is among the candidates. We typically examine up to 30 such candidates before declaring a search “negative.” If an association is made in AFIS, which occurs approximately 40% of the time, the AFIS request transitions to a comparison request and may lead to other, non-AFIS quality prints in the case being compared to this same individual. If an association is not obtained in the local database search, the state database is searched, and in some cases the national database, adding further to case complexity.

Widely recognized quality assurance standards in the latent print field require that all identifications made by an examiner be verified independently by a second examiner. This means every time one of our examiners makes an identification, the other examiner must examine that same print, compare it to the individual’s fingerprint record, and determine whether he or she agrees with the original call. The “verifier” must document his/her examination independently for inclusion in the case file.

In addition, every case reported must be technically and administratively reviewed prior to publication to ensure that the conclusions are supported by the case record and are properly stated in the report. These measures represent a significant investment of time, but are critical to ensuring the quality of the results we provide.

The Latent Print Unit is one of only 10 such units in the state of California that is accredited by the American Society of Laboratory Directors Laboratory Accreditation Board (ASCLD/LAB). As an accredited institution, the Unit must adhere to the many standards that apply to casework, casework documentation, and reporting. For example, case notes include a detailed analysis by the examiner regarding every individual print of value covering such observations as anatomical source, ridge flow, ridge path deviation, among others. These measures are essential to ensuring quality, but add to the time required to do the work.

As previously described, as the department custodian of latent print evidence, Unit staff is responsible for the intake, logging, quality assessment, and maintenance of 870 latent print evidence submissions received each year on average. The Unit has no clerical or technical support staff to assist with this work. This work is conducted entirely by latent print examiners.

Staffing

The Unit is currently staffed with two casework qualified Latent Print Examiners—the bare minimum required to operate at all. A third examiner is completing her training. She is being trained by the same two examiners who are tasked with casework. The time spent training the

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new examiner is time taken away from casework, but the investment is necessary and unavoidable given our caseload. Current staffing in the unit is 66% of what it was in 2006 when the Latent Print Unit was closed entirely to comparison and AFIS casework.

The closure of the Latent Print Unit in May 2006 was due to the loss of all of its three latent print examiners—representing a loss of 30+ examiner years of latent print casework experience. Two of the three positions were grant funded. Repeated efforts to move these positions to general purpose funding were denied. Unit staff resigned for employment they considered more stable. The third examiner was recruited away to a laboratory in the south bay area. Latent Print comparison work was contracted to Contra Costa County Sheriff's Department Laboratory for the duration—an arrangement that would not be available if the same thing were to happen today. Latent print processing continued in-house, performed by a police evidence technician assigned to the lab.

The Unit reopened 2 1/3 years later in September 2008 upon hiring the second of two latent print examiners. The police evidence technician retired in July 2009. His position was immediately frozen and subsequently deleted as part of the department's budget reduction measures. In order to restore the Unit, a criminalist vacancy in the Forensic Biology Unit was deleted and converted to a latent print examiner position, providing for a much needed third examiner. A candidate, hired in November 2010, is in the final phase of her training program.

However, in September 2009 the supervisor of the Latent Print Unit—who also oversaw the Drug Analysis Unit—accepted a Golden Handshake retirement offer. His position was frozen for two years and remains unfilled. Since that time, the Laboratory Director has assumed his former duties in the two units in addition to her other responsibilities.

Additionally, for the last several years, staff has seen their work year reduced as a result of mandatory furloughs. Staff are furloughed 20 days a year—the equivalent of one work month per examiner. This reduction in the work year negatively impacts productivity.

Prioritization of Casework

Prioritization of casework is extremely difficult under current conditions where the demand for service far exceeds the capacity of the unit, where extremely violent crimes continue to occur, and resulting priorities are in constant flux. The following summarizes current Laboratory policy regarding prioritization of requests for service.

In general:

- Homicides receive the highest priority
- Other crimes against persons take precedence over crimes against property

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- Crimes against property have the lowest priority.

Other factors:

- Cases with court dates are prioritized over those without
- Crimes representing an immediate threat to public safety, in which the evidence is highly probative and investigative leads are needed, receive a very high priority
- Crimes for which a suspect is in custody who cannot be held without the analytical results are prioritized over routine requests.

When a request is submitted, the individual investigator will indicate whether it is a priority request. It is common for there to be more priority requests than the Unit can handle, given our staffing. The Unit is not in a position to determine the priority of the raft of requests it receives, nor are we able to select, among offenses that appear to be equally serious, which ones merit more rapid attention. Priority requests in non-homicide cases are handled as we are able.

In recent years, we have established a Top 10 List. The list contains the highest priority homicide requests as determined by the CID Homicide Unit commander prior to department reorganization last July and, since that time by the Major Crimes Unit (MCU) Section 1 lieutenant, whose help has been invaluable.

The lieutenant can re-order the list by substituting one request for another (add/delete) or by changing the placement of a request on the list (moving it up or down). The only caveat is that a request cannot be de-prioritized if laboratory work has begun, unless it is canceled altogether. Examiners work the MCU cases in the order of priority.

Occasionally we look to the MCU lieutenant to vet the urgency of non-homicide "rush" requests originating from MCU as to whether it should be included in the list.

While MCU is a major customer of the laboratory, it is not the only customer. We must also work into the mix requests from other investigative units in the Criminal Investigation Division, such as Special Victims Unit which handles sexual assault investigations, and requests from the District Attorney's Office in cases with court deadlines.

When latent print casework is needed for court by a particular date, the Unit is advised of such by the District Attorney's Office either directly or through the OPD investigator. As indicated above, requests with court deadlines are prioritized over those without. The Unit has historically worked these cases in time to meet the court deadlines. Not infrequently, this requires altering the priority of other requests, at least temporarily, or the use of overtime. As a consequence, we

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do not see a need to develop an alternative policy or an administrative instruction to govern this process, as these cases are being worked within court deadlines.

In short, prioritizing cases is an extremely difficult exercise and one that is far from static. Priorities are constantly perturbed by new crime, court dates, the complexity of the work itself, and the chronic shortage of skilled examiners to meet the demand for service.

ANALYSIS

Based on the statistics for the last three years, we receive approximately 300 requests for service annually and worked approximately 100 annually. We have approximately 500 cases currently backlogged. Demand clearly exceeds current capacity.

To improve turnaround time, make better use of AFIS, address the current backlog and prevent it from re-establishing itself, achieve an economy of scale, and provide critical technical oversight of this operation, we project the need for the following additional staff

- 1 FTE Latent Print Examiner III (Supervisor)
- 2 FTE Latent Print Examiner II
- 2 FTE Forensic Technicians

The Forensic Technicians would provide casework support to Latent Print Examiners by conducting latent print quality assessments, initial AFIS searches, latent print processing casework, and evidence custodial assistance. This approach would maximize the amount of time Latent Print Examiners devote to comparison casework.

The Latent Print Examiner II's would be responsible for latent print comparison casework, confirming AFIS search results, and conducting verifications of identifications.

The Latent Print Examiner III would provide technical and supervisory oversight of the Unit, case management and insure adherence to quality standards. This individual would also engage in some casework.

The need for technically skilled oversight cannot be overstated. The Latent Print discipline is evolving, primarily in response to recommendations made by the National Academies of Science (NAS) in their 2009 report "*Strengthening Forensic Science in the United States: The Path Forward.*" The NAS was critical of the discipline for, among other things, its lack of a statistically based means to express the strength of associations and conclusions, and a means of determining error rate. We need to position ourselves to move in these directions. A technically skilled and knowledgeable supervisor is a critical element for our continued success.

The case throughput and turnaround issues are a resource driven problem that will be solved only by additional staffing.

PUBLIC OUTREACH/INTEREST

No public outreach was necessary at this time.

COORDINATION

The Criminal Investigation Division Unit Commander and staff contributed to this report.

COST SUMMARY/IMPLICATIONS

Demand for services exceeds current staffing. To increase service and reduce turnaround times as described under "Analysis" above, additional staff is need. The total burdened cost of additional staff described above is shown below.

Classification	Annual Base Pay per FTE	Burdened Cost per FTE*	# FTE	Total
Latent Print Examiner III (Supervisor)	\$82,854.24	\$133,652.17	1	\$133,652.17
Latent Print Examiner II	\$71,588.04	\$115,478.67	2	\$230,957.34
Forensic Technician	\$51,441.00	\$82,979.48	2	\$165,958.96
Total			5	\$530,568.47

* burdening rate of 61.31%

SUSTAINABLE OPPORTUNITIES

Economic: Effective and timely analysis of latent print evidence will assist the Police Department in conducting effective investigations and lead to the apprehension and prosecution of offenders, with resulting improvements in public safety. Greater public safety will enhance Oakland's reputation as a place to live and to engage in business, affording the City an opportunity for further financial growth.

Environmental: There are no environmental opportunities identified with this report.

Social Equity: Apprehending and prosecuting offenders will improve public safety for the citizens of Oakland.

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For questions regarding this report, please contact **Mary M. Gibbons**, Crime Laboratory Manager, at (510) 238-2108.

Respectfully submitted,



for _____
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Chief of Police

Prepared by:
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